DOCUMENT RESUME

ED 343 199 EA 023 631

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TITLE Teacher Absences: Are There Implications for Educational Restructuring?
PUB DATE Nov 91
NOTE 19p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (Lexington, KY, November 13-15, 1991).
PUB TYPE Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; Costs; *Educational Policy; Fringe Benefits; *Influences; Job Satisfaction; *School Restructuring; Secondary Education; *Teacher Attendance; Teaching Conditions
IDENTIFIERS *South Carolina

ABSTRACT

The issue of teacher absenteeism has become an increasingly important topic in educational policy, as teachers have gained generous sick day and personal leave benefits. The financial cost of teacher absenteeism is also problematic. In one national survey, the combined costs of absent teachers and substitutes came to $2 billion yearly. The literature reviewed for this study was limited to reasons for teacher absences, financial cost, suggestions for reducing absences, and effects of absences on student achievement. Additionally, the correlation between teacher attendance and student achievement was explored by analyzing data (teacher attendance and school incentive award winner status) from the 191 secondary schools in South Carolina for 3 school years, using an unpaired t-test and chi-square. A significant correlation at the .05 level of certainty was found in only one year (1987-88) for the data. The statistical result at this level of certainty was that secondary schools receiving an incentive award over the past 3 years cannot directly attribute their awards to higher rates of teacher attendance. Although the hypothesis was not verified, the data did list a higher teacher attendance rate for winning schools than for losing ones. Data tables are included. (11 references) (MLH)

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TEACHER ABSENCES:

ARE THERE IMPLICATIONS FOR

EDUCATIONAL RESTRUCTURING?

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A paper prepared for presentation at the annual meeting of the **Mid-South Educational Research Association** in Lexington, KY, November 13-15, 1991.

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TEACHER ABSENCES: ARE THERE IMPLICATIONS FOR EDUCATIONAL RESTRUCTURING?

ABSTRACT

The issue of teacher absenteeism has become an increasingly important topic in educational policy. The financial cost of teacher absenteeism has become a major problem to school systems. When the cost of paying for substitutes plus paying for the teacher was combined, the amount increased to approximately two billion dollars per year. A more important concern is how teacher absenteeism effects student achievement.

This study attempted to further explore the correlation between teacher attendance and student achievement by a analysis of data from South Carolina. Data from all secondary schools in South Carolina were analyzed in the form of two variables, teacher attendance rates and school incentive award status, using an unpaired t-test and chi-square. The statistical results for the past three school years were significant.

LITERATURE REVIEW

The literature reviewed for this study was limited to the following areas: the reasons for teacher absences, the financial cost of the absences, suggested ways to reduce the absences, and the effect of the absences on student achievement. In addition to this literature review, a three year analysis of data from the South Carolina Department of Education relating student achievement and teacher absences was obtained.

Reasons for Teacher Absences

A review of Leonard Pellicer's research (1984) suggested that an increase in teacher absences could be related to an absence of job satisfaction. According to Pellicer, a lack of job satisfaction caused serious withdrawal problems among teachers that resulted in excessive absenteeism. Job satisfiers included such variables as opportunities for advancement, recognition, delegated responsibilities, opportunities for success, and work dignity. Job dissatisfiers includes such variables as ineffective operating procedures, ineffective supervision, low salaries, poor worker relations, and poor working conditions. Pellicer believed that it was absolutely necessary for administrators to replace job dissatisfiers with job satisfiers before any serious attempt could be made to reduce teacher absenteeism. From his viewpoint, teacher attitude toward work was the key to absenteeism.

Another reason listed as a possible cause for increased teacher absenteeism has been linked to educational policy. Several groups representing teachers have been able to bargain with school b oards through contract negotiations for very generous sick day and personal leave policies. As a result of such policies, a nationwide survey indicated that 86% of all responding school systems reported an increased demand for substitution teacher days over the preceding five year period (Elliot & Manlove, 1977). Their research indicated that this increase has been a direct result of policy shifts where teachers view these days as an employee benefit.

Financial Cost

The financial cost of teacher absenteeism has become a major problem to school systems. A recent survey determined that a national average of seven (7) days per year was being used by teachers for sick and personal leave (Freeman & Grant, 1987). The cost for replacing absent teachers amounted to one-half billion on an annual basis (Bridger, 1980). When the cost of paying for substitutes plus paying for a teacher that was not present were combined, the amount increased to approximately tow billion per year (Lewis, 1981).

The Antioch (Illinois) Community Consolidated Schools found that the attendance rate for teachers was lower than the attendance rates for students and non-certified staff members. Antioch administrators discovered that their ten-days-per-year average of sick and personal leave for teachers was higher than the

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seven (7) day average for students and the six (6) day average for non-certified staff (Skidmore, 1984).

E. M. Bridges (1980) compared the rate of teacher absences with the rate of absences for industry. Using Federal Bureau of Labor statistics, Bridges found that the absentee rate for teachers was now higher than the absentee rate for industry. His research indicated a serious problem form the standpoint of comparing professionals to mostly non-professionals.

Reducing Absenteeism

The Merrick School District in Long Island, New York used an awareness program to successfully reduce teacher absenteeism. During the first year of implementation (1973-74) the district was able to reduce teacher absences by 55%, from 990 absences to 440 (Gendler, 1977). The system used a "total" approach that involved the school board, central office personnel, building administrators, and faculty representatives. The emphasis was a professional approach toward making all employees aware of the problem. By setting attendance goals and using a monitoring system to see if these goals were being met on an individual basis, the absentee rate was cut in half during the first year of implementation and has remained at satisfactory levels in subsequent years (Gendler, 1977).

The King William County School District in King William, Virginia used a salary supplement to successfully reduce teacher absenteeism. The district

offered a $2,000.00 salary supplement for teachers missing three or fewer days during the preceding year. The program resulted in an immediate reduction in the rate of teacher absenteeism (Stainback & Winborne, 1984).

The Sugar Hill Central School District in Sugar Hill, New York used a small salary supplement combined with recognition to successfully reduce teacher absenteeism. Developed in conjunction with New York State's Excellence in Teaching (EIT) program, the approach combined an extrinsic reward [salary supplement] with an intrinsic reward [recognition] (Jacobson, 1989). The monetary reward involved a parimutual pool that would pay off one share for each absence fewer than seven (7), the mean number of absences in the year (1985-86) prior to the plan. During the first year of use (1986-87) 1,274 shares were drawn from a pool of $72,809.22 by the system's 318 full-time teachers. Each share was worth $57.16, which computed to a bonus of $57.16 if a teacher missed six (6) days, $114.32 if a teacher missed five (5) days, etc. The maximum value was $400.12 for perfect attendance. The district reduced the average absentee rate from 7.24 days in 1985-86 to 5.90 days in 1986-87, a decline of 18.5% or 1.34 days per teacher. With an average salary of $37,000 for veteran teachers, the maximum bonus of $400.12 represented only a 1.08% salary increase for perfect attendance. It's effectiveness was enhanced, however, by the intrinsic recognition that district administrators provided in conjunction with it (Jacobson, 1989).

Student Achievement

In his study on student achievement, Lewis (1981) indicated that his research found a link between teacher attendance and student achievement. Basically, the three main points of his research were:

1. For schools classified as "high achieving," the rate of teacher attendance made no discernible difference in the level of student achievement.
2. For schools classified as "low achieving the rate of teacher attendance likewise made no discernible difference in the level of student achievement.
3. For schools classified as "average achieving," the rate of teacher attendance did make a discernible difference in the level of student achievement.

From his findings, the presence of the classroom teacher is an essential ingredient for average achieving students in their quest toward a quality education.

South Carolina

Indirectly, teacher attendance and student achievement are addressed by South Carolina's Education Improvement Act of 1984. One stipulation of this act has teacher attendance rates connected with School Incentive Award winners. Schools that have met the student achievement gain criterion can add an additional

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10% to their monetary award by having a teacher attendance rate of at least 96% (State of South Carolina, 1985). By linking a high level of teacher attendance by way of a bonus to a high level of student achievement, the state of South Carolina has concluded that there is a correlation between student achievement and teacher attendance.

RESEARCH ANALYSIS

To further explore the correlation between teacher attendance and student achievement, a three y ear analysis of data from the South Carolina Department of Education relating the two variable was conducted.

METHODOLOGY

In an attempt to determine the correlation between teacher attendance and student achievement, an analysis of data for the 191 secondary schools in the State of South Carolina for the school years 1987-88, 1988-89, and 1989-90 was conducted. The South Carolina Department of Education provided the data relating teacher attendance rates and School Incentive Award winner status for the 191 secondary schools in South Carolina over the past three years.

Definition of Terms

1. Teacher attendance. A percent computed by dividing the number of days attended by the number of days employed. Professional days,

military duty, jury duty, long-term illnesses, injury-on-the job, bereavement, and suspensions are not included in the days missed.

2. School Incentive Award winners. Those schools that qualified for a monetary award to further enhance the instructional program by demonstrating exceptional student achievement as indicated by meeting or exceeding the School Gain Index Standard for their category.

3. School Gain Index. A measure of student achievement using a variable scale from approximately -7 to +7. A school that performed as expected would have a zero gain index; a school that did not perform as expected would have a negative gain index; and, a school that performed better than expected would have a positive gain index.

4. School classification by category for School Gain Index. Schools in South Carolina are classified into one of five categories for setting the school gain index standard, which must be equaled or exceeded in order to be classified as a school incentive award winner. The most recent standard ranged from a 0.1 for Category I schools to a 2.2 for Category V schools. Categories are determined by four computerized factors: the percent of students receiving free or reduced lunch, the average teacher's years beyond the bachelor's

degree, the dollars per student collected locally beyond the Education Finance Act requirement, and the percent of students meeting or exceeding the readiness standard on the Congitive Skills Assessment Battery.

Purpose of the study

The purpose of the study was to determine whether or not schools qualifying for an incentive award had a significantly higher teacher attendance rate. All 191 secondary schools were included in the data without regard to category, with the assumption that the varying School Gain Index would compensate for the category.

Instrumentation

The school data used to the conduct the analysis was procured from the South Carolina Department of Education. To insure confidentially, the data sheets listed the 191 secondary schools by number rather than by name. For each school, the data matched the dependent variable (teacher attendance rate) with the independent variable (school incentive award winner status). The information was analyzed for the past three school years.

DATA ANALYSIS

Because the data were in the form of two variables (teacher attendance rates and school incentive award status), an unpaired t-test was used for analysis.

the two-tail approach was used, with a probability level of .05 (95% certainty) selected. The hypothesis to prove (or disprove) at this level of certainty was that secondary schools receiving an incentive award over the past three years in the state of South Carolina had a higher rate of teacher attendance.

Results

For each of the school year 1987-88, 38 secondary schools received an incentive award and 153 secondary schools did not receive an award. The mean teacher attendance rate for the winners was 96.847%, with a standard deviation of .747 and a standard error of measurement of .121. The mean teacher attendance rate for the non-winner was 96.434% with a standard deviation of 1.078 and a standard error of measurement of .081. The computed unpaired t value was 2.289, which converted to a two-tail probability level of .0232. The .0232 level meant that there was a 97.68% assurance that the hypothesis was valid. Since this is in excess of the 95% required for significance, the hypothesis was determined to be true. Table I illustrates these results.

For the school year 1988-89, 38 secondary schools received an incentive award and 153 secondary schools did not receive an award. The mean teacher attendance rate for the winners was 96.866% with a standard deviation of .679 and a standard error of measurement of .11. The mean teacher attendance rate for the non-winners was 96.7%, with a standard deviation of 1.02 and a standard error of measurement of .82. The computed unpaired t value was .95, which

converted to a two-tail probability level of .3434. The .3434 level indicated a 65.66% probability that the hypothesis was valid. Since this falls below the 95% required, the hypothesis did not hold true. Table II illustrates these results.

For the school year 1989-90, 40 secondary schools received an incentive award and 151 secondary schools did not receive an award. The mean teacher attendance rate for the winners was 96.685%, with a standard deviation of .558 and a standard error of measurement of .088. The mean teacher attendance rate for the non-winners was 96.498%, with a standard deviation of .84 and a standard error of measurement of .068. The computed unpaired t value was 1.33, which converted to a two-tail probability level of .1851. This .1851 level indicated that there was a 81.49% percent probability the hypothesis was true. Since 81.49% falls below the 95% required, the hypothesis did not hold true. Table III illustrates these results.

CONCLUSION

From a statistical point of view, it would be impossible to state that the hypothesis had been verified as true. A significant correlation at the .05 level of certainty was found in only one of the years for the data. The statistical result at this level of certainty was that secondary schools receiving an incentive award over the pas three years in the state of South Carolina can not directly attribute their awards to higher rates of teacher attendance. While not verifying, the data

did list a higher teacher attendance rate for winners than for non-winners of the three years. And although not significant, the item was noteworthy.

TABLE I

School Year 1987-88 Data

Unpaired t-Test X_1 : Win 88 Y_1 : Tat 88

DF:	Unpaired t Value:	Prob. (2-tail)
189	2.289	.0232

Group:	Count:	Mean:	Std. Dev.:	Std.Error:
Yes	38	96.847	.747	.121
No	153	96.424	1.078	.081

Mean Teacher Attendance Rate for School Incentive Award Winners-96.847%

Mean Teacher Attendance Rate for Non-winners of School Incentive Award--96.424%

Probability Level=0.0232 (significant)

TABLE II

School Year 1988-89 Data

Unpaired t-Test X_1 : Win 89 · y_1 : Tat 89

DF:	Unpaired t Value:	Prob.(2-tail):
189	.95	.3434

Group:	Count:	Mean:	Std. Dev:	Std. Error:
Yes	38	96.866	.679	.11
No	153	96.7	1.02	.82

Mean Teacher Attendance Rate for School Incentive Award Winners--96.866%

Mean Teacher Attendance Rate for Non-winners of School Incentive Award--96.70%

Probability Level=0.3434 (Not significant)

TABLE III

School Year 1989-90 Data

Unpaired t-Test X_1 : Win 90 y_1 : Tat 90

DF:	Unpaired t Value:	Prob. (2-tail):
189	1.33	.1851

Group:	Count:	Mean:	Std. Dev:	Std. Error:
Yes	40	96.685	.558	.088
No	151	96.498	.84	.068

Mean Teacher Attendance Rate for School Incentive Award Winners--96.685%

Mean Teacher Attendance Rate for Non-winners of School Incentive Award--96.498%

Probability Level=0.1851 (Not significant)

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